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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,364

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EXAMINER

WEDDLE, ALEXANDER MARION

ART UNIT

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1712

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,364	Applicant(s) BATEMAN ET AL.	
	Examiner ALEXANDER WEDDLE	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-25 and 27-45 is/are pending in the application.
- 4a) Of the above claim(s) 3,8,9,12-22 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,10,23-25,27 and 29-45 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 3, 8-9, 12-22, and 28 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to the nonelected species, there being no allowable generic or linking claim.

Because re-introducing withdrawn claims may require multiple searches, Examiner will not permit rejoinder at this time.

Response to Arguments

2. Applicant's claim amendments filed 11 March 2011 are sufficient to overcome the Claim Objections. The claim objections of 27 October 2010 have been withdrawn.

3. Applicant's claim amendments filed 11 March 2011 are sufficient to overcome the rejection of Claims 34-36 under 35 USC 112, second paragraph. The rejection of claims 34-36 under 35 USC 112, second paragraph of 27 October 2010 has been withdrawn, and a new rejection of Claim 25 under 35 USC 112, fourth paragraph is necessitated by amendment.

4. The rejection of Claims 1-2, 4-7, 23, 25-27, 29, 31-32, 34-36, and 39-43 under 35 USC 102(b) has been withdrawn and a rejection under 35 USC 103(a) is necessitated by amendment of the claims.

5. Applicant's arguments filed 11 March 2011 have been fully considered but they are not persuasive.

First, Examiner notes that although Applicant states that Claim 1 has been amended to further define the adhesion promoter as being selected from the Group

specifically listed in Claim 7 with the exception of aminosilane (Remarks, p. 10, fourth paragraph), that Applicant has not expressly excluded aminosilane.

In response to applicant's argument that the references fail to show certain features of applicant's invention (Remarks, p. 10, last paragraph), it is noted that the features upon which applicant relies (i.e., "the present method requires no prior 'priming' of the surface") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to Applicant's argument that because Fey teaches that organic amine compounds selected from groups within the scope of Applicant's claims are optional, it would not have been to modify the inventions of Meder with Fey (Remarks, p. 11, third paragraph), Meder and Fey are analogous art in the field of primer coating an article to promote adhesion of a subsequent coating. In addition, Fey teaches that the weight ratio of organic amine to aminoalkyl-substituted trialkoxysilane can be significant, up to 1:1 (col. 8, lines 4-9), and teaches embodiments actually employing an organic amine (Examples 4-9, col. 9, lines 20-31); therefore, a person seeking to enhance adhesion between two coating layers would look to Fey and find the recited low molecular-weight organic amines added in a significant amount in a process for promoting adhesion. Furthermore, the amines of Fey would inherently have promoted adhesion in applications, not excluded by the claims, as evidenced by Merz (US 2002/0002231) and Smith (US 4,732,944).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the fourth paragraph of 35 U.S.C. 112:

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

7. Claim 25 is rejected under 35 U.S.C. 112, fourth paragraph, as failing to further limit Claim 1, which now recites an organic solvent.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-2, 4-6, 10, 23-25, 27, and 29-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meder (5,212,017) in view of Fey (US 5,248,334).

Regarding Claims 1-2, 4-6, 10, and 25, Meder discloses a method of activating an organic surface (polyimide resin in particular) to enhance adhesion of a further coating thereon comprising: applying a solvent (N,N'-dimethylacetamide) and an adhesion promoter (aminopropyltrimethoxysilane) to the organic surface, wherein contact of the organic surface with the solvent results in swelling of the organic coating (see abstract and col. 5, lines 17-40). Further, while Meder generally discloses the substrate as a polyimide resin substrate, Meder teaches in col. 11, lines 18-24 that the substrate may be an article of any configuration including in the form of a laminate, whereby the preferred uppermost coating/layer would necessarily be the desired surface of polyimide resin.

Meder discloses that other adhesion promoting compounds were screened for use in its composition (col. 12, lines 20-34), however Meder is limited to the screening of silane adhesion promoters. Fey teaches the inclusion of adhesion promoting (organic) amine compounds with a nucleophilic functional group, such as ethylenediamine and triethylenetetraamine in a process for applying a silane primer to a variety of substrates (col. 4, lines 3-9; col. 8, lines 14-28); Applicant considers ethylenediamine and triethylenetetraamine to be low molecular weight amines (Claim

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10). It would have been obvious for one having ordinary skill in the art to practice the process of Meder by including ethylenediamine or triethylenetetraamine adhesion promoting amine depending upon the particular substrate and coating with the expectation of similar and successful results since Fey teaches that a primer mixture of silane and low molecular weight amines improves adhesion of a coating to a substrate and the low molecular weight amines taught in Fey would inherently have improved adhesion (Examples 4-9).

As to claims 23-24 and 29-30, Meder teaches that the concentration of gamma-aminopropyltrimethoxysilane in dimethylacetamide is about 0.1% to about 49% in col. 7, lines 4-7, which falls within the claimed range, but is silent as to another adhesion promoter. Fey teaches that an organic amine (adhesion promoter) is added in amount of 6.60% and solvent is less than about 99.9% based on total weight (col. 9, lines 14-26). Overlapping ranges are *prima facie* evidence of obviousness. It would have been obvious to one having ordinary skill in the art to have selected the portion of Meder's concentration range that corresponds to the claimed range. *In re Malagari*, 184 USPQ 549 (CCPA 1974). Generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical.

As to claim 27, Meder teaches in col. 12, lines 63-68 that isopropanol is used as the solvent in some comparative examples. Fey teaches dichloromethane (methylene chloride) (col. 4, lines 26-31). While it was not taught as the preferred solvent, it is stated to have adequately primed an abraded substrate.

As to claims 31-32, Meder teaches that additives, such as dyes, may be added to the primer composition (col. 7, lines 59-68).

As to claim 33, Meder is silent with respect to the amount of additive that may be added to its composition. It would have been obvious for one having ordinary skill in the art to have determined the optimum amount of additive through routine experimentation, such that it is enough to impart the additive properties but minimal enough to not affect the adhesive properties of the composition, in the absence of a showing of criticality. It is well settled that determination of optimum values of cause effective variables such as these process parameters is within the skill of one practicing in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980). In addition, generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical.

As to Claims 34-35 and 44-45, selection of any order of performing process steps and splitting one step into two is *prima facie* obvious in the absence of new or unexpected results.

As to claim 36, Meder teaches that the composition may be applied by spraying or brushing (col. 3, lines 16-18).

As to claim 37, Meder teaches that the substrate may be a variety of materials including resins, resin-bonded bodies, thermoplastic resins, and thermoset resins (col. 10, lines 23-32). Fey teaches it was known in the art to use amino-functional silicon compounds to improve adhesion to various substrates, including between a silicone elastomeric coating and polyurethane substrate (col. 1, lines 56-67). It would have

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been obvious to one of ordinary skill in the art to modify the process of the combination of references by selecting a known thermoplastic or thermoset resins, including those claimed, as the substrate since the combination of references is broadly inclusive of a large variety of acceptable organic coatings.

As to claim 38, Meder teaches that the any coating material which will bond to the primed substrate may be used to coat the articles of its invention (col. 11, lines 55-57). Fey teaches it was known in the art to use amino-functional silicon compounds to improve adhesion to various substrates, including between a silicone elastomeric coating and polyurethane substrate (col. 1, lines 56-67). It would have been obvious to have applied one of the claimed materials, such as a sealant, as the overlying layer with the expectation of successful results since the combination of references is inclusive and not limiting of any material that will bond.

As to claim 39, Meder teaches that drying may be carried out in any conventional manner, including by air at room temperature (natural evaporation) or in an oven (forced convection evaporation) (col. 8, lines 22-27).

As to claims 40-41, the process of Meder in view of Fey would reasonably have been expected to produce the coated substrate product of claim 40. As to claim 41, Meder teaches that the substrate may be metal, plastic, glass or wood in col. 10, lines 23-32.

As to claims 42-43, Meder teaches that the activation treatment as discussed above results in swelling of an organic coating on a substrate.

Allowable Subject Matter

12. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does not teach or fairly suggest use of DODA or TODA as the adhesion promoter compound for use in the method as claimed.

Conclusion

13. No Claim is allowed.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER WEDDLE whose telephone number is (571) 270-5346. The examiner can normally be reached on Monday-Thursday, 10:00 AM - 8:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on (571)272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. W./
Examiner, Art Unit 1712

/Katherine A Bareford/
Primary Examiner, Art Unit 1715